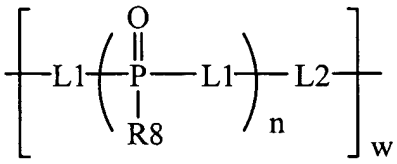
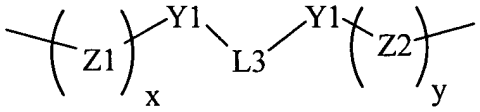
We claim:

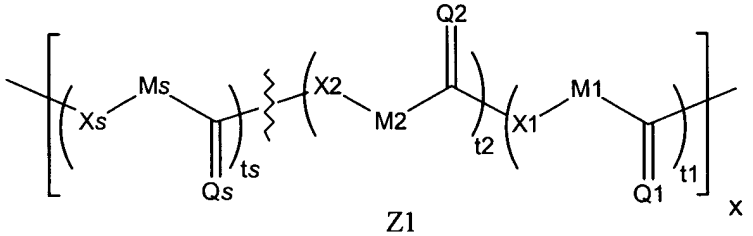
1. A composition comprising a polymer having two or more monomeric units represented by the following formula:



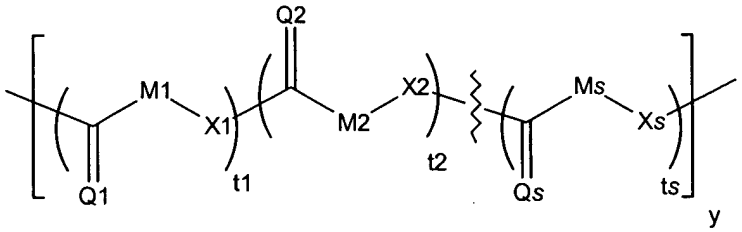
wherein, independently for each occurrence of said monomeric unit L1 has the following formula:



wherein Z1 and Z2, respectively, for each independent occurrence is:



Z1



Z2

wherein, independently for each occurrence of said L1 unit:

Q1, Q2 ... Q*s*, each independently, represent -O- or -N(R7);

X1, X2 ... X*s*, each independently, represent -O- or -N(R7);

R7 represents -H, -aryl, -alkenyl or -alkyl;

the sum of t1, t2 ... t*s* is an integer and equal to at least one or more;

Y1 represents -O-, -S- or -N(R7)-;

x and y are each independently integers from 1 to about 1000 or more;

L3 represents any chemical moiety that does not materially interfere with the biocompatibility of said polymer;

M1, M2 ... M*s* each independently, represents any chemical moiety that does not materially interfere with the biocompatibility of said polymer;

L2 represent a chemical moiety that does not materially interfere with the biocompatability of said polymer wherein L2 is terminated at each end with a -C(O)- radical;

R8 represents -H, alkyl, O-alkyl, cycloalkyl, O-cycloalkyl, cycloalkenyl, O-cycloalkenyl, aryl, O-aryl, heterocycle, O-heterocycle, polycycle, O-polycycle, or -N(R9)R10;

R9 and R10, each independently, represents -H, alkyl, alkenyl, $-(CH_2)_m-$R11, or R9 and R10, taken together with the N atom to which they are attached complete a heterocycle having from 4 to 8 atoms in the ring structure;

R11 represents -H, alkyl, aryl, cycloalkyl, cycloalkenyl, heterocycle or polycycle;

m represents an integer in the range of 0-10; and

n and w independently of each other represent an integer greater than 1.

2. The composition of claim 1, wherein said polymer is biodegradable.
3. The composition of claim 1, wherein said polymer is biocompatible.
4. The composition of claim 1, wherein said polymer comprises at least about five of said monomeric units.
5. The composition of claim 1, wherein said polymer comprises at least about ten of said monomeric units.
6. The composition of claim 1, wherein said polymer comprises at least about 95 percent of said monomeric units.
7. The composition of claim 3, wherein L1 is comprised of aromatic and non-aromatic moieties.

8. The composition of claim 1, wherein L2 is a $-C(O)C_6H_4C(O)-$ radical.

9. The composition of claim 1, wherein the number of non aromatic carbons in said monomeric units is greater than the number of aromatic ring carbons in said monomeric units.

10. The composition of claim 1, wherein the average ratio of (x or y):L3, when *ts* is equal to one, is from about 2:1 to 10:1.

11. The composition of claim 1, wherein L3 represents a divalent aromatic group.

12. The composition of claim 1, wherein each Q1, Q2...Q*s* and each X1, X2...X*s* of each of said L1 units of said polymer is O.

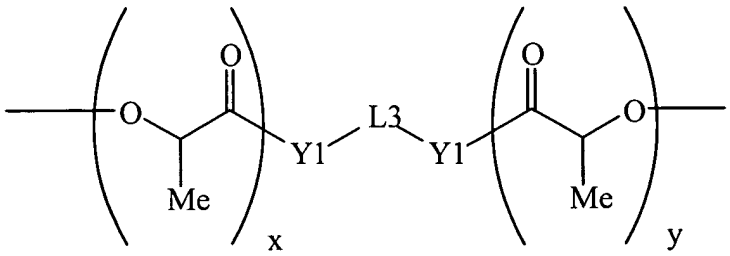
13. The composition of claim 1, wherein each M1, M2...M*s* of each of said L1 units of said polymer represents a divalent aliphatic moiety having from 1 to about 7 carbon atoms.

14. The composition of claim 12, wherein the sum of t1, t2...t*s* equals one for each of Z1 and Z2 and Q1 and X1 is O.

15. The composition of claim 1, wherein L3 along with Y1 form an aromatic diester.

16. The composition of claim 16, wherein L3 along with Y1 is terephthalate.

17. The composition of claim 5, wherein said L1 units are represented by the following formula:

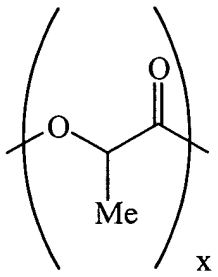


18. The composition of claim 17, wherein each Y1 represents O.

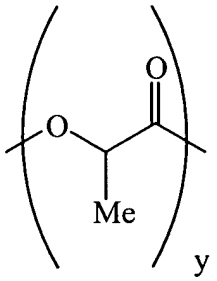
19. The composition of claim 17, wherein R8 represents -H, -alkyl, -aryl, -O-alkyl or -O-aryl.

20. The composition of claim 19, wherein said monomeric units comprise at least about 80 percent of said polymer.

21. The composition of claim 17, wherein the chiral carbon for each subunit

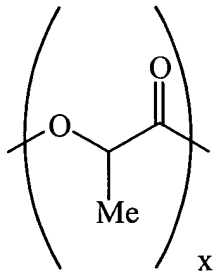


and

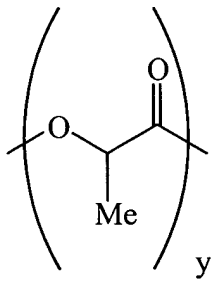


has the D configuration.

22. The composition of claim 17, wherein the chiral carbon for each subunit

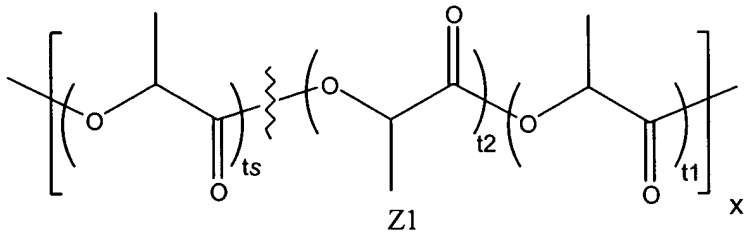


and

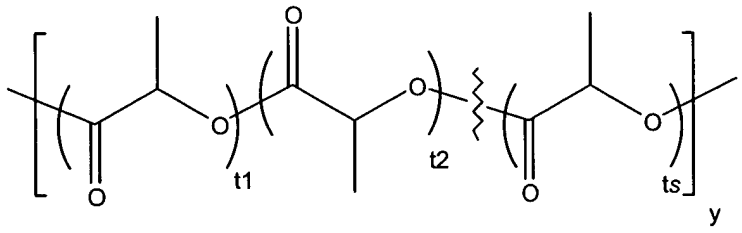


has the L configuration.

23. The composition of claim 4, wherein each of Z1 and Z2 is represented by:



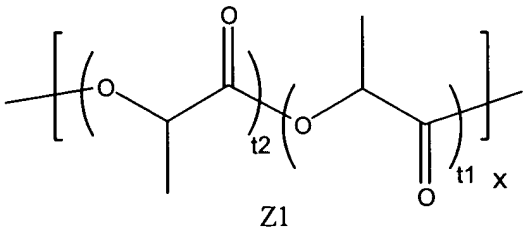
Z1



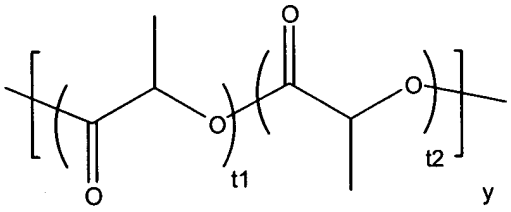
Z2

wherein the configuration of the chiral carbon for each ts may be D or L.

24. The composition of claim 1, wherein each of Z1 and Z2 is represented by:



Z1



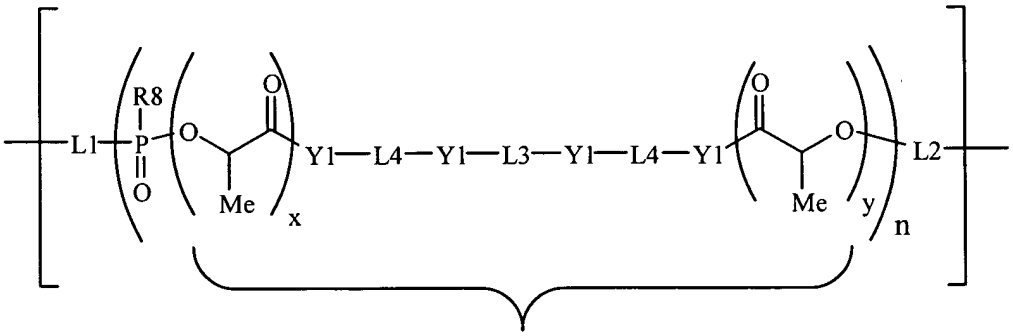
Z2

wherein the configuration of the chiral carbons independently for each unit x for Z1 and unit y for Z2 is either D for t1 and L for t2, or L for t1 and D for t2.

25. The composition of claim 24, wherein each of Y1 is O and L3 is a -C(O)(C_6H_4)C(O)- radical.

26. The composition of claim 25, wherein said monomeric units comprise at least about 95 percent of said polymer.

27. The composition of claim 1, wherein said polymer has one or more monomeric units represented by the following formula:



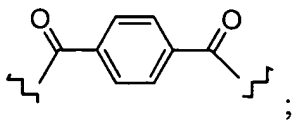
L1

wherein, independently for each occurrence of said monomeric unit:

Y1, each independently, represents -O-, -S-, or -(NR7)-;

R7 represents -H, -aryl, -alkenyl or -alkyl;

L2 and L3 represent a divalent group of the formula:



;

L4 represents any chemical moiety that does not materially interfere with the biocompatibility of said polymer;

R8 represents -H, -alkyl, -O-alkyl, -O-cycloalkyl, -aryl, -O-aryl, -heterocycle, -O-heterocycle, or -N(R9)R10;

R9 and R10, each independently, represent -H, -alkyl, -alkenyl, $-(CH_2)_m-$R11, or R9 and R10, taken together with the N atom to which they are attached complete a hetercycle having from 4 to about 8 atoms in the ring structure;

R11 represents H, alkyl, aryl, cycloalkyl, cycloalkenyl, heterocycle or polycycle;

m represents an integer in the range of 0-10;

x and y are each independently integers from 2 to about 1000 or more; and

n represents an integer greater than 1.

28. The composition of claim 27, wherein Y1 is -O-.

29. The composition of claim 27, wherein L4 is $-CH_2CH_2-$.

30. The composition of claim 27, wherein x and y are 2.

31. The composition of claim 27, wherein x and y are 2; Y1 is -O-; and L4 is $-CH_2CH_2-$.

32. The composition of claim 27, wherein the number of non aromatic carbons in said monomeric units is greater than the number of aromatic ring carbons in said monomeric units.

33. A pharmaceutical composition comprising a biologically active agent and any of the compositions of claims 1-32.

34. A method for treating or preventing a disease or condition, comprising administering to a patient a therapeutically effective amount of the pharmaceutical composition of claim 33.

35. A polyphosphoester polymer having a block structure, comprising:

a monomer unit comprising a polylactide structure; a -P(R)(O)- group where R is equal to -H, -R1 or -O-R1 wherein R1 represents an alkyl, cycloalkyl, aryl, or heteroaryl group; and a chemical moiety bonded through two -C(O)- radicals at its termini.

36. The polyphosphoester polymer of claim 35, wherein R is -O-R1.

37. The polyphosphoester polymer of claim 36, wherein R1 is an ethyl group.

38. The polyphosphoester polymer of claim 35, wherein said chemical moiety is -$C(O)C_6H_4C(O)$-.

39. The polyphosphoester polymer of claim 35, wherein said monomer unit comprises both aromatic and non-aromatic moieties.

40. The polyphosphoester polymer of claim 39, wherein the ratio of non-aromatic moieties to aromatic moieties is from about 2:1 to about 8:1.

41. The polyphosphoester polymer of claim 40 wherein said ratio of non-aromatic to aromatic moieties in the polyester is about 4:1.

42. The polyphosphoester polymer of claim 39, wherein the ratio of non-aromatic to aromatic moieties in said monomer unit is about 4:1; R is -OC_2H_5; and said chemical moiety is -$C(O)C_6H_4C(O)$-.

43. The polyphosphoester polymer of claim 39, wherein the number of non aromatic carbons in said monomer unit is greater than the number of aromatic ring carbons in said monomer unit.

44. The polyphosphoester polymer of claim 39, wherein said polyphosphoester polymer is biodegradable.

45. The polyphosphoester polymer of claim 39, wherein said polyphosphoester polymer is biocompatible.

46. A composition comprising said polyphosphoester polymer of claim 45 and one or more biologically active agents.

47. The composition of claim 46, wherein said composition is formulated in a pharmaceutically accepted carrier.

48. A method for treating or preventing a disease or condition, comprising administering to a patient a therapeutically effective amount of any one of the compositions of claim 46.